

3/9/2018

Print



Dart Hawkesbury  
1270 Aberdeen St Hawkesbury, ON K6A 1K7 Canada  
Tel (613) 632-5200

## Purchasing Receipts

PO No	Supplier	Line Item No	Rel No	Terms	Purchased Item	Description	For Part No	Project	Equipment ID	Order Qty	Due Date	Received Quantity	Accounting Job No	Container No	Status	Receive Date	Price/Unit	Aging Days	Past Due	To	
PO039087	ACI001-VC	6	1	Net 30	M17-4-H1150-R2.000	17-4 SS Round Bar 2.000" MATERIAL: 17-4 PH CONDITION H1150 receive ft				6	3/6/2018	6		S049642	Stock	3/9/2018	\$ 100.33 / ft	0		\$	
		7			M17-4-H1150-R1.500	17-4 SS Round Bar 1.500" MATERIAL: 17-4 PH CONDITION H1150 receive ft				8	3/9/2018	8		S049643	Stock	3/9/2018	\$ 56.09 / ft	0		\$	
		8			M1018R3.125	1018 Round Bar 3.125 MATERIAL: AISI 1018-1025 ROUND BAR M1010S20GA AS PER MIL-S-7097 OR ASTM A108						8		S049644	Stock	3/9/2018	\$ 60.38 / ft	0		\$	
Total:										22		22									\$1,19

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2/22/2018

## PURCHASE ORDER



Dart Aerospace Ltd.  
1270 Aberdeen St  
Hawkesbury, ON  
K6A 1K7  
Canada

Tel (613) 632-5200

# PURCHASE ORDER

## PO039087

**Supplier:** ACI001-VC  
Acier Ouellette Inc.  
935 Boul. Du Havre  
Valleyfield  
QC  
J6S 5L1 Canada  
Phone: 800 667 4248  
Fax: 450 377 5696

**Ship To:** 1270 Aberdeen Street  
Hawkesbury  
ON  
K6A 1K7 Canada  
Phone: 613-632-5200

**PO No:** PO039087

**PO Date:** 2/22/18

**Due Date:** 2/28/18

**Purchase Order**

**Revision:**

**Revision Date:**

**Ship-To Contact:** Lavoie, Chantal  
clavoie@dartaero.com

**Via:** Ground

**Pynt Terms:** Net 30

**Freight Terms:**

**Special Comments:** quotation # sou0086168

**E-MAILED**  
FEB 23 2018

## Items

Line Item	Part	Supplier Part No	Description	Status	Due Date	Order Quantity	Received Quantity	Balance	Unit Price (CAD)	Extended Price
1	M6061T6S1.250X14.000		6061-T6 Sheet 1.250" Thick x 14.000" Wide MATERIAL: 6061-T6/T62 ALUMINUM SHEET AS PER QQ-A-250/11 OR AMS-QQ-A-250/11 OR AMS 4025 OR AMS 4027 OR ASTM B209	Firmed	3/2/18	8 ft	0 ft	8 ft	\$101.01375/ft	\$808.11
2	MT-4140QT-R0.625		AISI 4140 Quenched & Tempered Steel Round Bar 0.625" Dia. AISI 4140 Q&T Round Bar MAT'L: AISI 4130 QUENCHED & TEMPERED ROUND BAR AS PER ASTM 4140 QT OR ASTM 4142 QT	Firmed	2/28/18	20 ft	0 ft	20 ft	\$2.878/ft	\$57.56
3	MT-4140QT-R2.750		AISI 4140 Q&T Round Bar MAT'L: AISI 4130 QUENCHED & TEMPERED ROUND BAR AS PER ASTM 4140 QT OR ASTM 4142 QT	Firmed	2/28/18	6 ft	0 ft	6 ft	\$37.57666/ft	\$225.46
4	MT-4140QT-R3.750		AISI 4140 Q&T Round Bar MAT'L: AISI 4130 QUENCHED & TEMPERED ROUND BAR AS PER ASTM 4140 QT OR ASTM 4142 QT	Firmed	2/28/18	6.167 ft	0 ft	6 ft	\$154.44341/ft	\$952.45

**Line Item Note** please cut bar in half to heavy for receiving

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## PURCHASE ORDER

2/22/2018

2/22/2018												
Items												
Line Item	Part	Supplier Part No	Description	Status	Due Date	Order Quantity	Received Quantity	Balance	Unit Price (CAD)	Extended Price		
5	MT-4140QT-R1.000		AISI 4140 Quenched & Tempered Steel Round Bar 1.000" Dia. AISI 4140 Q&T Round Bar : MAT'L: AISI 4130 QUENCHED & TEMPERED ROUND BAR AS PER ASTM 4140 QT OR ASTM 4142 QT	Firmed	2/28/18	10 ft	0 ft	10 ft	\$4.664/ft	\$46.64		
6	M17-4-H1150-R2.000		17-4 SS Round Bar 2.000" : MATERIAL: 17-4 PH CONDITION H1150 receive ft	Firmed	3/6/18	6 ft	0 ft	6 ft	\$100.3333/ft	\$602.00		
7	M17-4-H1150-R1.500		17-4 SS Round Bar 1.500" : MATERIAL: 17-4 PH CONDITION H1150 receive ft	Firmed	3/9/18	7.667 ft	0 ft	8 ft	\$56.08744/ft	\$450.92		
8	M1018R3.125		1018 Round Bar 3.125 MATERIAL: AISI 1018-1025 ROUND BAR M1010S20GA AS PER MIL-S-7097 OR ASTM A108	Firmed	3/9/18	8 ft	0 ft	8 ft	\$60.375/ft	\$483.00		
9	MT-HRS-R-2.500		Hot Rolled Steel Round Bar 2.500	Firmed	2/28/18	10 ft	0 ft	10 ft	\$13.676/ft	\$136.76		
Line Item Note please cut bar in half to heavy for receiving												
10	MT-A513-T-0.750W0.188		A513 Seamless Alloy Steel Round Tubing 0.75"dia. x 0.188" Wall	Firmed	2/28/18	20 ft	0 ft	20 ft	\$4.25/ft	\$85.00		
11	M6061T6R0.625		6061-T6 Round Bar .625" : MATERIAL: 6061-T6/T651/T6510/T6511/T62 ALUMINUM ROUND BAR AS PER QQ-A-225/8 OR AMS-QQ-A-225/8 OR AMS 4117 4128/4115/4116 OR QQ-AA-200/8 OR AMS-QQ-A-200/8 OR AMS 4160 OR ASTM B221 OR ASTM B221 receive ft	Firmed	2/28/18	40 ft	0 ft	40 ft	\$0.99625/ft	\$39.85		
12	M6061T6R0.563		6061-T6 Round Bar .563 : MATERIAL: 6061-T6/T651/T6510/T6511/T62 ALUMINUM ROUND BAR AS PER QQ-A-225/8 OR AMS-QQ-A-225/8 OR AMS 4117 4128/4115/4116 OR QQ-AA-200/8 OR AMS-QQ-A-200/8 OR AMS 4160 OR ASTM B221 OR ASTM B221 receive ft	Firmed	2/28/18	96 ft	0 ft	96 ft	\$1.0897222/ft	\$104.61		

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**Grand Total: \$4,899.47**

Procurement Quality Clauses

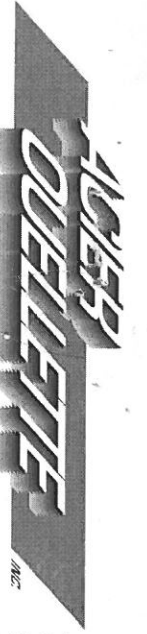
- A005 right of entry
- A012 chemical and physical test report
- A016 personnel qualification
- A017 raw material identification (as applicable)
- A026 certification of material conformance
- A041 quality management system
- A042 dart notification by supplier
- A043 retention of quality documents

A048 counterfeit parts avoidance, detection, mitigation and disposition program

A049 supplier awareness

Terms & Condition of Purchasing(Suppliers) and Procurement Quality Clauses are an integral part of our AS9100 requirements. To learn in detail, please visit [www.dartaerospace.com](http://www.dartaerospace.com) for further explanation.

Plex 2/22/18 1:26 PM dart.lavoie.chantal



**DELIVERY - CLIENT**

**ACIER OUELLETTE INC.**  
935, Boul. du Hâvre  
Salaberry de Valleyfield (Québec) J6S 5L1  
Tél.: 450-377-4248 Mtl: 514-336-4248 Ext.: 800-667-4248  
Fax: 450-377-5696 Mtl: 514-336-4246 Ext.: 866-456-4242

**Copy** CO00075634

**Billed to**

DART AEROSPACE LTD

1270, ABERDEEN ST.  
HAWKESBURY, Ontario, K6A 1K7

**Shipped to**

, Ontario,

**Instruction** F-M

Att : CHANTAL LAVOIE Tél.: 613-632-5200  
**Delivery Route** 5

**Page** 1

1

Product Description	Weight	Qty	U/M	PCS NB			Internal Use Only				
				CMD	EXP	B/O	IN	I	S	C	OUT
1 ROUND SS 2 1/4 NS RSS-2174 <b>10131</b> <i>1 X 6'</i> <i>HEAT: SH1181-G5011</i> <i>ACI3837-JG-07/03</i>	64.08	6.00	PI_\$CLB		<i>1 x 6'</i>		<i>6'</i>		<i>DAS</i> <i>11</i> <i>9-89</i> <i>MAR 09 2018</i>		
2 ROND STAINLESS 1 1/2 17-4 RANDOM NS RSS-112174-V <b>8868</b> <i>1 X 92"</i> <i>HEAT: 556V</i> <i>ACI3835-JG-07/03</i>	45.48	7.67	PI_\$CLB		<i>1 x 92"</i>		<i>8'</i>		<i>DAS</i> <i>11</i> <i>9-89</i> <i>MAR 09 2018</i>		
3 ROND CR 3 1/8 1018 NS RCR-318 <b>10132</b> <i>1 X 8'</i> <i>HEAT: A173355</i> <i>ACI3836-GR-07/03</i>	208.56	8.00	PI_\$CLB		<i>1 x 8'</i>		<i>8'</i>		<i>DAS</i> <i>11</i> <i>9-89</i> <i>MAR 09 2018</i>		

NIR : R-109516-6



Y  
M  
D  
180309

75634  
**CERTIFICATE OF TEST**  
**CERTIFICAT D'ESSAIS**

70.13837

Page 01 of 02

**CUSTOMER ORDER NUMBER**  
**NUMÉRO DE COMMANDE DU CLIENT**

**Certification Date**  
7-MAR-2018

**Invoice Number**  
T376681

AC00013837  
**PART NUMBER/NUMÉRO DE PIÈCE**  
510451

**SOLD TO:** ACIER OUELLETTE INC. **SHIP TO:** ACIER OUELLETTE INC.  
**VENDU À:** DIVISION SALABERRY DE VALLEYFIELD **EXPÉDIENT:** DIVISION SALABERRY DE VALLEYFIELD  
935, BOUL. DU HAVRE 935, BOUL. DU HAVRE  
SALABERRY-DE- VALLEYFIELD QC J6S 5L1 SALABERRY-DE- VALLEYFIE QC J6S

Description: 17-4 CF BAR COND H1150 ASTM A564  
2 RD X 12" R/L  
HEAT: SH1181-G5011 ITEM: 510451 Line Total: 128 LB

Specifications:  
AMS 5643 U ASTM A564 T630 M13 ASME SA564 T630 M13  
ASTM A388/A388M 16

**CHEMICAL ANALYSIS**

C	SI	MN	P	S	NI	CR	MO
0.02	0.45	0.61	0.024	0.001	4.36	15.33	0.20
CU	NBTA	TA					
3.40	0.22	0.0031					

RCPT: R301322

**COUNTRY OF ORIGIN : TAIWAN**

**MECHANICAL PROPERTIES**

DESCRIPTION	YLD STR KSI	ULT TEN KSI	%ELONG IN 02 IN	%RED IN AREA	HARDNESS RC
COND H1150	112.0	138.0	22.0	75.0	32

GRAIN SIZE : 6

The above data were transcribed from the manufacturer's Certificate of Test after verification for completeness and specification requirements of the information on the certificate. All test results remain on file subject to examination. /Les informations ci-haut-mentionnées sont transcrites du certificat d'essais du manufacturier après vérification de l'état complet des spécifications inscrites sur le certificat. We hereby certify that the material covered by this report will meet the applicable requirements described herein, including any specification forming a part of the description. /Par les présentes, nous certifions que le matériel couvert par ce rapport rencontre les spécifications décrites ci-haut.

The willful recording of false, fictitious, or fraudulent statements in connection with test results may be punishable as a felony under federal statutes. /Les informations fausses, fictives ou frauduleuses en rapport avec le résultat des essais sont punissables en vertu des lois fédérales.

Material did not come in contact with mercury while in our possession. /Par les présentes, nous certifions que le matériel couvert par ce rapport n'a rencontré les spécifications décrites ci-haut.

JOANNE DESPRES

**MANAGER QUALITY ASSURANCE**  
**GÉRANT DE L'ASSURANCE QUALITÉ**

# CERTIFICATE OF TEST CERTIFICAT D'ESSAIS

Page 02 of 02

Certification Date  
7-MAR-2018

CUSTOMER ORDER NUMBER  
NUMÉRO DE COMMANDE DU CLIENT

AC00013837

Invoice Number  
T376681

PART NUMBER/NUMÉRO DE PIÈCE  
510451

<b>SOLD TO:</b>	ACIER OUELLETTE INC.	<b>SHIP TO:</b>	ACIER OUELLETTE INC.
<b>VENDU À:</b>	DIVISION SALABERRY DE VALLEYFIELD	<b>EXPÉDIÉ À:</b>	DIVISION SALABERRY DE VALLEYFIELD
	935, BOUL. DU HAVRE		935, BOUL. DU HAVRE
	SALABERRY-DE- VALLEYFIELD QC J6S 5L1		SALABERRY-DE- VALLEYFIE QC J6S

Description: 17-4 CF BAR COND H1150  
2 RD X 12' R/L

ASTM A564  
Line Total: 128 LB

HEAT: SH1181-G5011 ITEM: 510451

MATERIAL IS FREE FROM MERCURY CONTAMINATION  
NO WELD REPAIR PERFORMED ON MATERIAL  
THERMAL TREATMENT: OK  
SOLUTION TREATMENT 1900 +/- DEGREE F>30 MIN/INCH  
FAST COOLED TO BELOW 90 DEGREE  
MACRO: OK  
MICRO1:  
MICRO CONTAINS NO MORE THAN 5% FERRITE

## COMMENTS

country of origin: taiwan  
reduction ratio 56.3:1

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Material did not come in contact with mercury while in our possession. /Par les présentes, nous certifions que le matériel couvert par ce rapport rencontre les spécifications décrites ci-haut.

JOANNE DESPRES



MANAGER QUALITY ASSURANCE  
GÉRANT DE L'ASSURANCE QUALITÉ





NORTH AMERICAN  
STAINLESS

METALLURGICAL TEST REPORT

Certificate: 347471 02

Date: 10/25/2017 Page: 1 of 2

Customer: 0245 001

Steel: 630(17-4)  
Finish: CE-Temper  
Dia/Thk: 1.5000 in

NAS Order: LP 67199 13

Red Ratio: 32.0 :1 Heat Treat Code: 43,759

Leg Length: 144.00 in

Your Order: P807462-423

Item Code: 510447

Corrosion:

PRODUCT DESCRIPTION:

SOLUTION AMS. @ 1900F MIN FOR 1 HOUR PER INCH & AIR COOLED  
ROUND BAR, Smooth turned, Condition H-1150  
ASTM A564/10, AMS 2750D, AMS-E-6875B, MIL STD 1685A  
AMS 2303, AMS 5643T, AMS 5644/07, MACRO OK, EN 10204 3.1  
TEMPERED @ 1150F FOR 4 HOURS MIN AND AIR COOLED TO ROOM TEMP  
ANNEALED @ 1900F FOR 1 HOUR MIN AND AIR COOLED TO ROOM TEMP  
FINE GRAIN, EN 10204 3.1

REMARKS:

COMPLIES W/REQUIREMENTS OF DPA 251.225-7009 BY DIRECTIVE  
2011/65/EU NONS. RAY-ADD-CC. NO WELD REPAIR. MELTED AND WELD  
IN USA FREE FROM MERCURY AND LOW MELTING ALLOY CONTAMINATION

Bundle Weight	Bundle Weight	Bundle Weight	Bundle Weight	Bundle Weight	Bundle Weight	Bundle Weight	Bundle Weight	Bundle Weight	Bundle Weight
BJ07974	3005								

CHEMICAL ANALYSIS

CM(Country of Melt) ES(Spain) US(United States) ZA(South Africa) JP(Japan)

Lab Accreditation Bureau, ISO/IEC 17025, Certificate# LA323

Chemical Analysis per ASTM A751/14a

Element	Supplier Heat	CM	C %	CB %	CO %	CR %	CU %	NI %	MO %	N %	NT %	P %
556V	US	.033	.274	.05	15.31	3.15	.75	.02	.021	4.26	.020	
	S %	BT %	TA %	TI %								
	.0146	.56	.0130	.0025								

MECHANICAL PROPERTIES

14 01 01	AMS Surf No.	MS H1150 No.	.2YS H1150 KSI	TMS H1150 KSI	RA H1150 %	Ring H1150 Grain % AD	MO. No.	Ferrite %	PREQ. No.	SEV. No.	
BJ07974	R L	282.0	302.0	113.25	138.38	65.79	21.30	8.0	.15	.31	.16

NAS hereby certifies that the analysis on this certification is correct. Based upon the results and the accuracy of the test methods used, the material meets the specifications stated. These results relate only to the items tested and this report cannot be reproduced, except in its entirety, without the written approval of NAS.

Technical  
Dept. Mgr.

KRIS LARK

10.75634

DART

2334504

1013835

75634



NORTH AMERICAN  
STAINLESS

# METALLURGICAL TEST REPORT

6870 Highway 42 East  
Chenit, KY 41045-9615  
(502) 347-6000

Certificate: 347471 02

Date: 10/25/2017 Page: 2 of 2

Steel: 630(17-4)

Finish: CR-Temper

dia/Tbk: 1.5000 in

Leg Length: 144.00 in

Corrosion:

Customer: 0245 001

NAS Order: LP 67199 13

Red Ratio: 32.0 :1 Heat Treat Code: 43,759

Your Order: P807462-423

Item Code: 510447

## PRODUCT DESCRIPTION:

SOLUTION ANNE. @ 1900F MIN FOR 1 HOUR PER INCH & AIR COOLED  
Round Bar, Smooth turned, Condition H-1150  
ASTM A564/10, AMS 2750D, AMS-B-6875B, MIL STD 1685A  
AMS 2303, AMS 5643T, AMS 68564/07, NACRO OK, ER 10204 3.1  
TEMPERED @ 1150F FOR 4 HOURS MIN AND AIR COOLED TO ROOM TEMP  
ANNEALED @ 1900F FOR 1 HOUR MIN AND AIR COOLED TO ROOM TEMP  
FINE GRAIN, ER 10204 3.1

## REMARKS:

COMPLIES W/REQUIREMENTS OF DPAH 252.225-7009 NO DIRECTIVE  
2011/65/EU, ROHS, EAF+ADP+CC. NO WELD REPAIR, WELDED AND RIG  
IN UBA FREE FROM MERCURY AND LOW MELTING ALLOY CONTAMINATION

Bundle Weight	Bundle Weight	Bundle Weight	Bundle Weight	Bundle Weight	Bundle Weight	Bundle Weight	Bundle Weight	Bundle Weight	Bundle Weight
B207974	3005								

## CHEMICAL ANALYSIS

Lab Accreditation Bureau, ISO/IEC 17025, Certificate# 12323

NAS Heat Supplier Heat CM

556V US

## MECHANICAL PROPERTIES

1 d o i c z	Impact FTLB	Impact FTLB	Impact FTLB	IMP AVG FTLB	IMP Temp F
B207974 R L	91.00	99.00	94.00	95.00	75.0

NAS hereby certifies that the analysis on this certification is correct. Based upon the results and the accuracy of the test methods used, the material meets the specifications stated. These results relate only to the items tested and this report cannot be reproduced, except in its entirety, without the written approval of NAS

Technical  
Dept. Mgr.

KRIS LARK

# CERTIFICATE OF TEST CERTIFICAT D'ESSAIS

PO, 13836

Page 01 of 01

Certification Date  
5-MAR-2018

CUSTOMER ORDER NUMBER  
NUMÉRO DE COMMANDE DU CLIENT

Invoice Number  
T376682

FRANCINE  
PART NUMBER/NUMÉRO DE PIÈCE

SOLD TO: DECORATION METALLIQUE G.R. SHIRO:  
VENDU À: 509 CURE BOIVIN  
BOISBRIAND QC J7G 2A8

EXPÉDIÉ À: DECORATION METALLIQUE G.R. INC  
509 CURE BOIVIN  
BOISBRIAND QC J7G 2

Description: 1018 CF BAR ASTM A108  
3-1/8 RD X 20 R/L  
HEAT: A173355 ITEM: 501158

Line Total: 534 LB

Specifications:  
ASTM A108 13

ASTM A29/A29M 16

JDM AO QL-2

## CHEMICAL ANALYSIS

C	MN	P	S	SI	NI	CR	MO
0.17	0.66	0.008	0.021	0.26	0.07	0.12	0.03
CU	AL	N	B				
0.20	0.034	0.011	0.0003				

RCPT: R403562

COUNTRY OF ORIGIN : USA

IDEAL DIAMETER : 0.53 IN GRAIN SIZE : 5 - 8

STRAND CAST MATERIAL IS FREE FROM MERCURY CONTAMINATION  
NO WELD REPAIR PERFORMED ON MATERIAL

### COMMENTS

source/melted: steel dynamics (usa)  
red ratio: 17.5:1

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Material did not come in contact with mercury while in our possession. /Par les présentes, nous certifions que le matériel couvert par ce rapport rencontre les spécifications décrites ci-haut.

JOANNE DESPRES

MANAGER QUALITY ASSURANCE  
GÉRANT DE L'ASSURANCE QUALITÉ

29:50 8T0Z/70/EO

*Handwritten notes:*  
Mergent  
CR108  
3 1/8  
more  
CR108  
7/8" CR108

## MATERIAL RECEIPT INSPECTION FORM

MATERIAL: M1018R3.125  
 DATE: MAR 09 2018

PO / BATCH NO.: 039087/5049644

MATERIAL CERT REC'D: yes  
 QUANTITY RECEIVED: 8  
 QUANTITY INSPECTED: 8  
 QUANTITY REJECTED: 0

THICKNESS ORDERED: 3.125  
 THICKNESS RECEIVED: 3.125  
 SHEET SIZE ORDERED: N/A  
 SHEET SIZE RECEIVED: N/A

DESCRIPTION	NCR (Check Y/N)	COMMENTS
SURFACE DAMAGE	Y (N)	
CORRECT FINISH	(Y) N	
CORROSION	Y (N)	
CORRECT GRAIN DIRECTION	(Y) N	
CORRECT MATERIAL PER M-DRAWING	(Y) N	<u>Astm A108</u>
CORRECT THICKNESS	(Y) N	
PHOTO REQUIRED	Y (N)	
CORRECT REF # TO LINK CERT	(Y) N	<u>Heat # A173355</u>
CORRECT MATERIAL IDENTIFICATION	(Y) N	
CORRECT M# ON THE MATERIAL	(Y) N	
DOES THIS MATERIAL REQUIRE ENGINEERING SIGN OFF	Y (N)	
DOES THIS REQUIRE AN EXTRUSION REPORT	Y (N)	

CUT SAMPLE PIECE OF MATERIAL AND PREFORM A HARDNESS CHECK. RECORD RESULTS BELOW					
	HRC	HRB	DUR A	DUR D	WEBSTER
TYPE OF MATERIAL					
SIZE OF TEST SAMPLE					
HARDNESS / DUROMETER READING					

testers located in the Quality Office

QC 18 INSPECTION	ENGINEERING SIGNOFF (if required)
INSPECTED BY: <u>DAS 11</u>	SIGNED OFF BY: _____
DATE: <u>9-89 MAR 09 2018</u>	DATE: _____

Attach this inspection sheet with the corresponding material cert and remit to be scanned and received in

# SPECIFICATION CONTROL DRAWING

PURCHASE MATERIAL: AISI 1018-1025 ROUND BAR

SPECIFICATION:

MIL-S-7097 OR ASTM A108

PART NUMBER:

M1018-R/D DDD WHERE D DDD = DIAMETER IN INCHES  
DIA.

TOLERANCES:

EG. 7/8" ROUND BAR = M1018-R0.875

PER ASTM A108 AS FOLLOWS:

SIZE TOLERANCE  
UP TO 1.5" INCL. +0.000/-0.002  
OVER 1.5" TO 2.5" INCL. +0.000/-0.003  
OVER 2.5" TO 4.0" INCL. +0.000/-0.004  
OVER 4.0" TO 6.0" INCL. +0.000/-0.005  
OVER 6.0" TO 8.0" INCL. +0.000/-0.006

RELEASED  
11 2012-09-24

REV.	DESCRIPTION	CP	DS	BY	DATE
A	REFORMAT, ADD ASTM A108, ADD TOLERANCES				12.09.05
B	NEW ISSUE				01.06.12
DESIGN	DS				
DRAWN	CP				
CHECKED	CP				
MFG. APPR.	CP				
APPROVED	CP				
DE APPR.	CP				
DATE	12.09.05				

**DART AEROSPACE LTD**  
HAWKESBURY, ONTARIO, CANADA  
DRAWING NO. M1018-R  
TITLE 1018-1025 ROUND BAR  
REV. B  
SHEET 1 OF 1  
SCALE NTS  
COPYRIGHT © 2001 BY DART AEROSPACE LTD.  
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## MATERIAL RECEIPT INSPECTION FORM

MATERIAL: M17-4-H1150 R 1.500  
 DATE: MAR 09 2018

PO / BATCH NO.: 039087/5049643

MATERIAL CERT REC'D: yes  
 QUANTITY RECEIVED: 81  
 QUANTITY INSPECTED: 81  
 QUANTITY REJECTED: 0

THICKNESS ORDERED: 1.500  
 THICKNESS RECEIVED: 1.500  
 SHEET SIZE ORDERED: N/A  
 SHEET SIZE RECEIVED: N/A

DESCRIPTION	NCR (Check Y/N)	COMMENTS
SURFACE DAMAGE	Y (N)	
CORRECT FINISH	(Y) N	
CORROSION	Y (N)	
CORRECT GRAIN DIRECTION	(Y) N	
CORRECT MATERIAL PER M-DRAWING	(Y) N	<u>Aston A564</u>
CORRECT THICKNESS	(Y) N	
PHOTO REQUIRED	Y (N)	
CORRECT REF # TO LINK CERT	(Y) N	<u>Heat # 5361</u>
CORRECT MATERIAL IDENTIFICATION	(Y) N	
CORRECT M# ON THE MATERIAL	(Y) N	
DOES THIS MATERIAL REQUIRE ENGINEERING SIGN OFF	Y (N)	
DOES THIS REQUIRE AN EXTRUSION REPORT	Y (N)	

CUT SAMPLE PIECE OF MATERIAL AND PREFORM A HARDNESS CHECK. RECORD RESULTS BELOW					
	HRC	HRB	DUR A	DUR D	WEBSTER
TYPE OF MATERIAL					
SIZE OF TEST SAMPLE					
HARDNESS / DUROMETER READING					

testers located in the Quality Office

QC 18 INSPECTION	ENGINEERING SIGNOFF (if required)
INSPECTED BY: <u>DAS 11</u> DATE: <u>9-89 MAR 09 2018</u>	SIGNED OFF BY: _____ DATE: _____

Attach this inspection sheet with the corresponding material cert and remit to be scanned and received in

SPECIFICATION CONTROL DRAWING

PURCHASE MATERIAL: 17-4 PH / S17400 / TYPE 630 SS ROUND BAR  
GRAIN MUST BE ALONG LENGTH OF BAR  
MINIMUM YIELD STRENGTH PER TABLE  
MINIMUM ULTIMATE STRENGTH PER TABLE

SPECIFICATION: AMS 5643 OR ASTM A564

PART NUMBER: M17-4-HHHH-R | X.XXX | WHERE: HHHH SPECIFIES THE MATERIAL CONDITION (PER TABLE BELOW)  
COND | O.D. | X.XXX = DIAMETER (IN INCHES)

MATERIAL CONDITION TABLE:

CODE	CONDITION	MIN YIELD TENSILE STRENGTH (KSI)	MIN ULTIMATE TENSILE STRENGTH (KSI)
(OMITTED)	NONE SPECIFIED (CONDITION A NOT ACCEPTABLE)	100	150
H900	H900	170	190
H925	H925	155	170
H1025	H1025	145	155
H1075	H1075	125	145
H1100	H1100	115	140
H1150	H1150	105	135
CONDA	CONDITION A (SOLUTION TREATED)		

NOTES: MATERIAL IN H900 AND H925 CONDITION NOT RECOMMENDED FOR  
TENSION OR SHEAR APPLICATIONS IN COLD WEATHER CONDITIONS  
MATERIAL IN H900 AND H925 CONDITION NOT RECOMMENDED FOR  
APPLICATIONS WHERE STRESS CORROSION CRACKING IS POSSIBLE  
CONDITION A NOT TO BE USED IN DESIGN FOR FINAL PRODUCT AND  
SHOULD ALWAYS BE HEAT TREATED

EXAMPLES:

PART  
4.000" DIAMETER BAR MIN UTS = 150 KSI, MIN YTS = 100 KSI  
3.500" DIAMETER BAR H900 CONDITION  
3.250" DIAMETER BAR H1025 CONDITION  
0.750" DIAMETER BAR A CONDITION

PART NUMBER  
M17-4-R4.000  
M17-4-H900-R2.500  
M17-4-H1025-R3.250  
M17-4-CONDA-R0.750

RELEASED  
2017-10-31  
EW17-728

APPROVED

C	ADDED MATERIAL CONDITION (CIR17-107)	NO	17.09.14
B	REFORMAT DWG. S17400/TYPE 630 ADDED TO REFORMAT MATERIAL (ZIN DB-1), ADD A564 SPEC (C8-1), REF PAR 05-020A	VS	10.05.20
A	NEW ISSUE	CP	05.03.16
REV	DESCRIPTION	BY	DATE
DESIGN	NO		
DRAWN	NO		
CHECKED	CP		
MFG. APPR.	RA		
APPROVED	WM		
DE APPR.	CP		
DATE	17.09.14		
DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA			
DRAWING NO. M17-4-R			
SHEET 1 OF 1			
SCALE NTS			
17-4 SS ROUND BAR			
DATE 17.09.14			
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## MATERIAL RECEIPT INSPECTION FORM

MATERIAL: M174-H1150-R2.000  
 DATE: MAR 09 2018

PO / BATCH NO.: 039087/5049642

MATERIAL CERT REC'D: yes  
 QUANTITY RECEIVED: 6'  
 QUANTITY INSPECTED: 6'  
 QUANTITY REJECTED: 0

THICKNESS ORDERED: 2.000  
 THICKNESS RECEIVED: 2.000  
 SHEET SIZE ORDERED: N/A  
 SHEET SIZE RECEIVED: N/A

DESCRIPTION	NCR (Check Y/N)	COMMENTS
SURFACE DAMAGE	Y <input checked="" type="radio"/> N <input type="radio"/>	
CORRECT FINISH	Y <input checked="" type="radio"/> N <input type="radio"/>	
CORROSION	Y <input checked="" type="radio"/> N <input type="radio"/>	
CORRECT GRAIN DIRECTION	Y <input checked="" type="radio"/> N <input type="radio"/>	
CORRECT MATERIAL PER M-DRAWING	Y <input checked="" type="radio"/> N <input type="radio"/>	AMS 5643
CORRECT THICKNESS	Y <input checked="" type="radio"/> N <input type="radio"/>	
PHOTO REQUIRED	Y <input checked="" type="radio"/> N <input type="radio"/>	
CORRECT REF # TO LINK CERT	Y <input checked="" type="radio"/> N <input type="radio"/>	Heat # SH181-65011
CORRECT MATERIAL IDENTIFICATION	Y <input checked="" type="radio"/> N <input type="radio"/>	
CORRECT M# ON THE MATERIAL	Y <input checked="" type="radio"/> N <input type="radio"/>	
DOES THIS MATERIAL REQUIRE ENGINEERING SIGN OFF	Y <input type="radio"/> N <input checked="" type="radio"/>	
DOES THIS REQUIRE AN EXTRUSION REPORT	Y <input type="radio"/> N <input checked="" type="radio"/>	

CUT SAMPLE PIECE OF MATERIAL AND PREFORM A HARDNESS CHECK. RECORD RESULTS BELOW					
	HRC	HRB	DUR A	DUR D	WEBSTER
TYPE OF MATERIAL					
SIZE OF TEST SAMPLE					
HARDNESS / DUROMETER READING					

testers located in the Quality Office

QC 18 INSPECTION	ENGINEERING SIGNOFF (if required)
INSPECTED BY: <u>DAS 11</u>	SIGNED OFF BY: _____
DATE: <u>9-89 MAR 09 2018</u>	DATE: _____

Attach this inspection sheet with the corresponding material cert and remit to be scanned and received in



# SPECIFICATION CONTROL DRAWING

**PURCHASE MATERIAL:** 17-4 PH / S17400 / TYPE 630 SS ROUND BAR  
GRAIN MUST BE ALONG LENGTH OF BAR  
MINIMUM YIELD STRENGTH PER TABLE  
MINIMUM ULTIMATE STRENGTH PER TABLE

**SPECIFICATION:** AMS 5643 OR ASTM A564

**PART NUMBER:** M17-4-1 HHHH-R X.XXX WHERE: HHHH SPECIFIES THE MATERIAL CONDITION (PER TABLE BELOW)  
X.XXX = DIAMETER (IN INCHES)

## MATERIAL CONDITION TABLE:

CODE	CONDITION	MIN YIELD TENSILE STRENGTH (KSI)	MIN ULTIMATE TENSILE STRENGTH (KSI)
(OMITTED)	NONE SPECIFIED (CONDITION A NOT ACCEPTABLE)	100	150
H900	H900	170	190
H925	H925	155	170
H1025	H1025	145	155
H1075	H1075	125	145
H1100	H1100	115	140
H1150	H1150	105	135
CONDA	CONDITION A (SOLUTION TREATED)		

**NOTES:** MATERIAL IN H900 AND H925 CONDITION NOT RECOMMENDED FOR TENSION OR SHEAR APPLICATIONS IN COLD WEATHER CONDITIONS  
MATERIAL IN H800 AND H925 CONDITION NOT RECOMMENDED FOR APPLICATIONS WHERE STRESS CORROSION CRACKING IS POSSIBLE  
CONDITION A NOT TO BE USED IN DESIGN FOR FINAL PRODUCT AND SHOULD ALWAYS BE HEAT TREATED

## EXAMPLES:

**PART**  
4.000" DIAMETER BAR MIN YTS = 150 KSI MIN YTS = 100 KSI  
2.500" DIAMETER BAR H900 CONDITION  
3.250" DIAMETER BAR H1025 CONDITION  
0.750" DIAMETER BAR A CONDITION

**PART NUMBER**  
M17-4-R4.000  
M17-4-H900-R2.500  
M17-4-H1025-R3.250  
M17-4-CONDA-R0.750

RELEASED  
2017-10-31  
E17-728

APPROVED

C	ADDED MATERIAL CONDITION (CIR17-107)	NO	17.09.14
B	REFORMAT DWG. S17400/TYPE 630 ADDED TO REF PART 08-020A	VS	10.05.20
A	NEW ISSUE	CP	05.03.16
REV	DESCRIPTION	BY	DATE
DESIGN	NO		
DRAWN	NO		
CHECKED	CP		
MFG. APPR.	RA		
APPROVED	WM		
DE APPR.	CP		
DATE	17.09.14		
DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA			
DRAWING NO. M17-4-R			
SHEET 1 OF 1			
SCALE NTS			
17-4 SS ROUND BAR			
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